

## Little Pend Oreille National Wildlife Refuge Tench Eradication

**Refuge/complex name:** Little Pend Oreille NWR

**Project title:** McDowell Lake Tench Eradication

**Total amount requested:** \$5400

**Project description:** Breeding age tench (*Tinca tinca*) were found in McDowell Lake (48 acres) in June of 2012. Tench are a large fish in the family Cyprinidae (carp) that have the potential to quickly overrun a small lake. Like other Cyprinids tench are bottom feeders that will alter the lake bottom making it unsuitable for other species. Gill net surveys caught numerous tench in June of 2012. Given their ability to quickly reproduce the tench will soon overrun the lake if not treated. The state considers McDowell Lake as one of the most important trout fisheries in NE Washington. We are proposing a cooperative project with the Washington Department of Fish and Wildlife (WADFW) to eradicate tench in the McDowell Lake system and restore native trout. The McDowell Lake system is an impounded water body that consists of a diversion structure in the North Fork of Bear Creek and an outlet water control structure. The diversion and control structures are acting as fish exclusion devices preventing movement of tench or other invasive species if further introductions are prevented. The water control structure is failing and is scheduled for replacement in September, 2014. Replacement of the control structure is being delayed to coincide with optimum conditions for rotenone application to the lake. The lake will be drained to the lowest possible level for replacement of the structure. Application of rotenone at this time of minimal water volume will greatly reduce costs versus treatment at higher water levels. WADFW is able to supply rotenone from existing stocks as well as staff for the application. Once the lake is drawn down boat access is no longer possible. Access to upstream portions of the creek and areas impounded by beavers are also not accessible by boat. We are proposing to apply the treatment using a helicopter. The increased cost of aircraft should be compensated by the increased efficiency of the treatment and a higher probability of a successful treatment. Application of rotenone piscicide to the lake and associated waters would occur in September/October, 2014. We are also proposing the development and placement of signage at access points to inform the public of the project and the negative impact of invasive fish.

**Distinct project with well-defined objectives (10 points):** The project proposes to treat tench in a limited and well defined area. The objective is complete eradication of tench in McDowell Lake and contiguous wetlands. Once tench are eliminated the system will be restored with native fish species.

**Potential for maximum control/Likelihood of success (10 points):** The use of rotenone piscicide has proven effective in restoration projects at other lakes in eastern Washington and northern Idaho. State biologists have been successful with total eradication and will be assisting the refuge with the proposed project. Tench cannot persist in moving waters and are not known to be in other refuge lakes or ponds. Therefore, if successful this project will eradicate them from refuge waters.

**Biological benefit to priority species or BIDEH (10 points):** If not treated there is a high probability tench will significantly alter the lake bottom. When this happens native aquatic flora and fauna will be squeezed out. Several species of waterfowl, Bald Eagles, Osprey, herons,

**Comment [BF1]:** Decent response, but fails to give concrete reassurances that the eradication can be successful.

**Comment [BF2]:** BIDEH for sure, but for a very small piece of the world (48 acres), though a unique character of a much larger landscape.

otters, painted turtles, amphibians, native trout, and other species depend on the lake system for a portion of their habitat needs. Thus a continued tench invasion would have severe impacts on biological integrity, diversity, and environmental health of the lake system.

**Sustainability (10 points):** The diversion and control structures act as fish exclusion devices preventing dispersal of tench or other invasive species if further introductions are prevented. If we are able to accomplish complete eradication as expected we should be able to maintain a tench-free system indefinitely

**Comment [BF3]:** Why am I not convinced. I think it's the insistent "if further introductions are prevented" caveat that makes me skeptical. Were the fish dumped in?

**Monitoring to document and evaluate project success (10 points):** Annual monitoring of McDowell Lake using angler report forms to determine species presence and relative abundance has been conducted in cooperation with WADFW for several years and will continue indefinitely. Periodically, gill nets will also be deployed by WADFW to sample fish species composition. Monitoring will also be conducted during treatment to assess impacts to water quality and aquatic invertebrates.

**Comment [BF4]:** I think this would qualify as an acceptable minimal level of monitoring.

## Budget:

### Funds Requested

Aircraft services to apply rotenone	\$5000
Informational signage	\$400

### Resources Provided

#### LPONWR:

Staff LPO Refuge:

GS 11 Biologist	2.5 pp	@	\$3020 /pp	\$7550
GS-5 Bio Tech	1/2 pp	@	\$1212 /pp	\$606

Equipment LPO Refuge: spray equipment, sampling equipment, vehicles, small row boat  
Housing for WADFW staff during treatment period

#### WADFW

Staff WADFW:

WADFW F&W Biologist 3	1.90 mos.	@	\$7151 /mo	\$13588
WADFW F&W Biologist 2	0.60 mos.	@	\$5519 /mo	\$ 3311
WADFW Scientific Technician	0.05 mos.	@	\$5123 /mo	\$256
WADFW travel	4 pers. 2 days	@	\$46 /day	\$368

Rotenone and supplies:	\$20594
Fish stocking after treatment	\$5795

WADFW total	\$43912
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Total Project Cost	\$62068
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<u>Requested Amount</u>	<u>\$5400</u>
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